

Montana Board of Oil and Gas Conservation Environmental Assessment

Operator: Omimex Canada Ltd.
Well Name/Number: Ostby 3-34
Location: NE NE Section 34 T31N R58E
County: Sheridan, MT; Field (or Wildcat) North Anvil Field

Air Quality

(possible concerns)

Long drilling time No, 20-30 days drilling time.

Unusually deep drilling (high horsepower rig): Triple derrick drilling rig to drill to 9500' vertically.

Possible H₂S gas production: Yes, possible H₂S.

In/near Class I air quality area: No Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☒ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Existing pipeline for gas in the area.

Water Quality

(possible concerns)

Salt/oil based mud: Yes, oil based drilling fluids for the main hole. Surface casing hole will be drilled with freshwater and freshwater mud system.

High water table: Possible high water table.

Surface drainage leads to live water: Yes, unnamed ephemeral drainage drains to a shallow pot hole lake, about 1.25 miles to the south of this location.

Water well contamination: None, only 1 water well, about 1.25 miles to the southeast from this location. Depth of this water well is 40'.

Porous/permeable soils: No, sandy silty clay soils.

Class I stream drainage No, Class I stream drainages.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: _____

Comments: 200' of surface casing is not enough casing to cover the base of the Fox Hills Formation. Recommend minimum of 1750' surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None.

High erosion potential: No, a moderate cut, up to 11.8' and small fill, up to 8.3', will be required.

Loss of soil productivity: None, location to be restored after drilling well, if well is unsuccessful. If successful the unused portion of the wellsite will be restored. Surface use appears to be grassland.

Unusually large wellsite: No, large well site 300'X400'

Damage to improvements: No, location to be restored after drilling, if well is unsuccessful. If successful the unused portion of the wellsite will be restored.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: Cuttings will be buried in the existing lined reserve pit. Fluids will be recycled to another drilling location or hauled to a commercial disposal. Access is from the south off a county road, County Line Road and existing well access road. A new access road will be built, about 1758' into location from the existing well access road.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: None, within 1 mile of this location.

Possibility of H2S: Yes, possible.

Size of rig/length of drilling time: Triple drilling rig 20 to 30 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☒ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): Medicine Lake National Wildlife Refuge, about 8.25 miles to the north northwest, from this location.

Proximity to recreation sites: Medicine Lake National Wildlife Refuge, about 8.25 miles to the north northwest, from this location.

Creation of new access to wildlife habitat: No, creation of new access to wildlife habitat.

Conflict with game range/refuge management: No

Threatened or endangered Species: Species listed as threatened or endangered by the USFWS are the whooping Crane and the Piping Plover. Candidate species is listed as the Sprague's Pipit. NH tracker site lists the following species of concerns for this area are the Baird's Sparrow, Nelson's Sparrow, Grasshopper Sparrow, Sprague's Pipit, Burrowing Owl, Ferruginous Hawk, Bobolink and Long-billed Curlew.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: _____

Comments: Well is on private surface land. Well will be drilled in late winter. All listed species of birds are migratory and will not be impacted by the drilling of this well.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified.

Mitigation

avoidance (topographic tolerance, location exception)

other agency review (SHPO, DSL, federal agencies)

Other:

Comments: Private surface land.

Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: No concerns.

Remarks or Special Concerns for this site

Lodgepole formation test with a target of the Mission Canyon formation, 9,500' TVD. Existing producing Mission Canyon well in the same 1/4 section.

Summary: Evaluation of Impacts and Cumulative effects

No long term impact expected with the drilling of this well, some short term impacts are expected.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title:) Chief Field Inspector

Date: January 24, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center website

(Name and Agency)

Sheridan County water wells

(subject discussed)

January 24, 2011

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Sheridan County

(subject discussed)

January 24, 2011

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T31N R58E

(subject discussed)

January 24, 2011

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____